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Dear City Councilmembers,

The February public meetings with Mr. Bernd Franke gave over 150 Berkeley citizens the opportunity to hear about his study of the Lawrence Berkeley Lab Tritium Labeling Facility. As he made clear during his remarks and in his Draft Final Report 2-2-01, he found no evidence that current or recent tritium exposures have reached or exceeded the safety limits for tritium set in the Clean Air Act. As he said in response to a question from the audience, if he had children in Berkeley he would allow them to use the Lawrence Hall of Science; it was an unexpectedly personal endorsement of the safety of the tritium lab. He also commented that local media reports had distorted and exaggerated the meaning of his written comments on fire hazards at the tritium lab. He had many words of praise and appreciation for the cooperation of LBL, and he commented that they had been open and forthcoming with the information he requested. He was particularly pleased that they were following his earlier recommendations regarding air emissions monitoring sites.

Mr. Franke's several suggestions for future monitoring and oversight of LBL can and should be followed-up; this is an appropriate task for our Toxics Management department. LBL has arranged for an independent assessment of the fire and seismic issues about which questions have been raised. In response to Mr. Franke's questions about radiation from accelerators at LBL several decades ago, the Lab has already published a revised evaluation. In one more year we will have results from the new environmental sampling study which is now underway. The city's Toxics department and Community Environmental Advisory Commission remain in touch with Mr. Franke and await his final report next year with interest. (I should add that this letter reflects my personal views; neither the Toxics department nor the commission have taken an official position.)

So once again we are reaching the end of an investigation of the tritium facility which has produced the same general results as the five preceding studies.

Dr. Thomas McKone, Kevin Brand, and Chao Shan (1997): the maximum yearly radiation dose to a member of the public from tritium is 0.13 mrem, less than the additional cosmic radiation received during an airplane flight from Oakland to Los Angeles. This is an insignificant fraction of the 200-260 mrem we all get every year from background radiation in the Bay Area.

This study was reviewed and approved by the U S and California departments of Health and Human Services, the U S Public Health Service, and the U S Environmental Protection Agency.

Dr. Tore Straume (1998) : the risk of dying as a result of tritium emissions for workers in the immediate vicinity of the tritium lab is as remote as being killed by explosives; for residents living immediately adjacent to LBL the risk is less than one-tenth as much, about the same as the risk of death from the bite of a venomous animal, approximately 1 out of 10,000,000 per year. For the rest of Berkeley up to 2 kilometers from the lab, the risk is about one-tenth of that.

U S Agency for Toxic Substances and Disease Registry (1999): studied the lab and reported no indication of health risk for nearby residents. Specifically, they noted “no indication of an unusual occurrence of cancer cases among the population of the LBNL area” and no problems of contamination of drinking water. Regarding infertility from tritium emissions, they noted that the doses required to affect reproductive capacities were “several orders of magnitude higher than the radiation doses received from tritium released from LBNL.”

National Center for Research Resources (1999): reported that risks were “exceedingly small. “...the maximum lifetime dose, due to tritium emissions from the NTLF, to a (hypothetical) individual both living and working for his/her entire lifetime at the perimeter of the NTLF is less than 1 mSv. For comparison, the lifetime dose from natural sources (radon, cosmic rays, etc) is about 250 mSv.”

Senes Oak Ridge Center for Risk Analysis (2000): concluded that exposures were “far below dose and risk limits established for the protection of public health.” One of the authors, Dr. Owen Hoffman, commented at the recent meeting that in his entire career assessing radiologic risk he had never seen an instance where the concern was so high and the risk was so low. (He quoted Mr. Franke as having said that he had seen only one other situation with so little risk and so much anxiety.)

Thus, we have had six studies, and all have indicated that the operations of the tritium lab pose no measurable threat to our health and safety. The city has responded repeatedly and generously to the citizens concerned about tritium. Literally hundreds of hours of staff time have been expended by the city’s Toxics department, diverting attention from other pressing concerns. The studies conducted by Dr. Straume and Mr. Franke were paid for by the city. In fact, Dr. Straume was hired to do his evaluation at the suggestion of the CMTW, a group of Berkeley citizens who have been most worried about tritium emissions. However, they were dissatisfied with his report and suggested another consulting firm. The current study was actually done by that firm’s sister organization of which Mr. Franke is a principal member. It now appears that they are equally unhappy with Mr. Franke. The CMTW has recently been reported to have received a \$20,000 grant, and plans to remain actively engaged against the tritium lab.

This letter is an attempt to remind the council and the rest of Berkeley that competent investigators from universities, private risk analysis organizations, public health departments, the Environmental Protection Agency, and the National Center for Research Resources have found no reason for Berkeley citizens to live in fear of the tritium labeling lab up the hill. We can look forward to a time in the near future when the city of Berkeley can take tritium off its agenda.

Sincerely,

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